CLAIMS

What is claimed is:

1. An integrated circuit (IC) comprising:
at least one circuit element;
a node coupled to the at least one circuit element;
at least one non-floating terminal on a surface of the IC;
at least one floating terminal on the surface of the IC; and
at least one coupling element to couple any combination of the at least one floating terminal and the at least one non-floating terminal to the node.

2. The IC recited in claim 1 wherein the node is from the group consisting of power nodes, ground nodes, and input/output nodes.

3. The IC recited in claim 1 wherein the at least one floating terminal comprises a capacitive element.

4. The IC recited in claim 3 wherein the capacitive element comprises a connector element, at least one dielectric layer, and a conductor that can be selectively coupled to the node.

5. The IC recited in claim 4 wherein the connector element comprises a solder bump.

6. The IC recited in claim 1 wherein the coupling element comprises selector logic coupled to the at least one floating terminal, to the at least one non-floating terminal, and to the node, and comprising at least one control input.

7. An integrated circuit (IC) comprising:

a plurality of circuit elements;

a plurality of nodes coupled to the plurality of circuit elements;

a plurality of non-floating terminals on a surface of the IC;

at least one floating terminal on the surface of the IC; and

selector logic coupled to the terminals and to the plurality of nodes to couple any combination of the at least one floating terminal and one of the plurality of non-floating terminals to one of the plurality of nodes.

8. The IC recited in claim 7 wherein the one node is from the group consisting of power nodes, ground nodes, and input/output nodes.

9. The IC recited in claim 7 wherein the at least one floating terminal comprises a capacitive element.

10. The IC recited in claim 9 wherein the capacitive element comprises a connector element, at least one dielectric layer, and a conductor that can be selectively coupled to the one node.

11. The IC recited in claim 10 wherein the connector element comprises a solder bump.

12. The IC recited in claim 7 wherein the selector logic comprises at least one control input and further comprises at least one output to selectively couple any combination of the at least one floating terminal and one of the plurality of non-floating terminals to the one node.

13. An electronic assembly comprising:

an integrated circuit (IC) comprising:

at least one circuit element;

a node coupled to the at least one circuit element;

at least one floating terminal on the surface of the IC; and

at least one coupling element to switchably couple the at least one floating terminal to the node; and

an IC package substrate comprising a plurality of pads and internal circuit paths, including at least one pad and at least one internal circuit path to couple to the at least one floating terminal.

14. The electronic assembly recited in claim 13 wherein the at least one floating terminal comprises a capacitive element, and wherein the capacitive element comprises a connector element coupled to the at least one pad, at least one dielectric layer, and a conductor to be switchably coupled to the node.

15. The electronic assembly recited in claim 13 wherein the at least one coupling element comprises selector logic coupled to the at least one floating terminal and to the node, and comprising at least one control input.

16. A method of testing an integrated circuit (IC) comprising a plurality of circuit elements and a plurality of terminals including at least one floating terminal, the method comprising:

testing the IC;

identifying at least one circuit element that is not optimally functioning; and

coupling the at least one floating terminal to the at least one circuit element.

17. The method recited in claim 16 wherein the IC is from the group consisting of a microprocessor, a microcontroller, a graphics processor, a digital signal processor, an application-specific integrated circuit, a memory circuit, a communications circuit, an artificial intelligence circuit, a neural network, a logic circuit, a computational circuit, a processing circuit, a sensing circuit, a transducer circuit, a power circuit, an amplifying circuit, a data conversion circuit, a data transmission circuit, a data receiving circuit, a custom circuit, and a control circuit.

18. The method recited in claim 16 wherein the IC comprises a plurality of floating terminals and selector logic coupled to the plurality of floating terminals, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling at least one floating terminal to the at least one circuit element.

19. The method recited in claim 18 wherein the IC further comprises a plurality of non-floating terminals, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling at least one floating terminal and at least one non-floating terminal to the at least one circuit element.

20. The method recited in claim 18 wherein the IC further comprises a plurality of non-floating terminals, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling either a floating terminal or a non-floating terminal, but not both, to the at least one circuit element.

21. The method recited in claim 16 wherein the IC further comprises a plurality of floating and non-floating terminals, and selector logic coupled to the floating and non-floating terminals, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling any combination of floating and non-floating terminals to the at least one circuit element.

22. The method recited in claim 16 wherein the IC comprises at least one floating power terminal, at least one non-floating power terminal, at least one floating ground terminal, at least one non-floating ground terminal, the terminals being coupled to the at least one circuit element, and the IC further comprising selector logic coupled to the terminals, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling any combination of floating and non-floating terminals to the at least one circuit element.

23. The method recited in claim 22 wherein the IC further comprises at least one floating input/output (I/O) terminal, and at least one non-floating I/O terminal, the at least one floating I/O terminal and the at least one non-floating I/O terminal being coupled to the at least one circuit element and to the selector logic, and wherein the method further comprises:

providing at least one control signal to the selector logic; and

the selector logic coupling any combination of floating and non-floating terminals to the at least one circuit element.

24. A method of fabricating an integrated circuit (IC) comprising a circuit element and a plurality of non-floating terminals coupled to the circuit element, the method comprising:

determining a subset of the plurality of non-floating terminals whose operational characteristics may require adjustment when the IC is operating; and

providing a floating terminal for each of the subset of non-floating terminals.

25. The method recited in claim 24 wherein the operational characteristics comprise resistive-capacitive (RC) characteristics.

26. The method recited in claim 24 wherein at least one of the subset of non-floating terminals is from the group consisting of a power terminal, a ground terminal, and an input/output terminal.

27. The method recited in claim 24 and further comprising:

providing an IC package substrate comprising a plurality of pads and internal circuit paths, including at least one pad and at least one internal circuit path to couple to each of the floating terminals; and

mounting the IC on the IC package substrate.

28. The integrated circuit recited in claim 1 wherein the at least one circuit element is selected from the group consisting of a digital logic circuit, an analog circuit, a power circuit, a sense circuit, an amplifier circuit, and a radio circuit.

29. The integrated circuit recited in claim 1 wherein the at least one circuit element comprises an inverter circuit.